

DOCKET: BU9-99-022B

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTOR:	Marc W. Cantell et al.	)	PRIOR	T. Quach
		)	EXAMINER:	
SERIAL NO.:	Divisional Application of U.S.	)	PRIOR ART	2814
	Serial No. 09/365,859	)	UNIT:	
FILING DATE:		)	DATE:	December 27, 2000
FOR:	OSCILLATOR WITH	)		
	DIGITALLY VARIABLE PHASE	)		
	FOR A PHASE-LOCKED LOOP	)		

**PRELIMINARY AMENDMENT**

**BOX PATENT APPLICATION**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Dear Sir:

Applicants respectfully submit the following preliminary amendment for entry in the above-identified Divisional application of pending application serial number 08/898,443.

**In the Specification**

On page 3, line 19, after "of" (second occurrence) insert -- a -- .

On page 3, line 23, after "invention" insert -- is -- .

On page 5, line 6, delete "comprising" and substitute therefor -- comprises -- .

On page 8, line 22, after "pressure" insert -- of -- .

On page 8, line 24, delete "in the" and substitute therefor -- of -- .

**In the Claims**

Please cancel claims 1-9.

Amend the following claims:

- 1     10. (Amended) An apparatus for forming a silicide on a surface of a  
2     semiconductor substrate, [said apparatus being adapted to form a vacuum therein,  
3     said apparatus further adapted to remove an oxide from said surface of said  
4     substrate and deposit a metal on said surface of said substrate while maintaining  
5     said vacuum, said apparatus] comprising:  
6         a chamber;  
7         at least one workpiece holder within said chamber adapted to hold said  
8         substrate;  
9         at least one pump adapted to evacuate said chamber;  
10        at least one line operatively connected between said at least one pump and  
11        said chamber for evacuating said chamber;  
12        at least one input line adapted to provide a chemical agent into said chamber,  
13        said chemical agent adapted to remove [said] an oxide from said surface of  
14        said substrate;  
15        at least one output line adapted to remove said cleaning agent and said  
16        removed oxide from said chamber;  
17        a heating element in said chamber, said heating element adapted to heat said  
18        substrate to an elevated temperature; and

19 a reactor in said chamber, said reactor adapted to deposit [said] a metal onto  
20 said substrate surface  
21 wherein said apparatus is adapted to form a continuous vacuum therein, said  
22 apparatus further adapted to remove said oxide from said surface of said substrate  
23 and deposit said metal on said surface of said substrate while maintaining said  
24 continuous vacuum.

1 11. (Amended) The apparatus of claim 10 wherein said apparatus is further  
2 adapted to heat said substrate to form [said] a silicide on said surface of said  
3 substrate.

1 12. (Amended) The apparatus of claim 10 wherein said chamber comprises a  
2 plurality of interior chambers, at least one interior chamber adapted to remove said  
3 oxide from said surface of said substrate while under said continuous vacuum, and  
4 at least one interior chamber adapted to deposit said metal on said surface of said  
5 substrate while under said continuous vacuum.

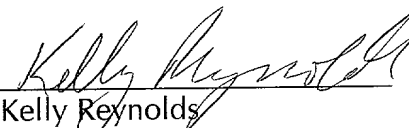
1 14. (Amended) The apparatus of claim 12 wherein said apparatus is adapted to  
2 transfer said substrate between said interior chamber adapted to remove said oxide  
3 from said surface of said substrate and said interior chamber adapted to deposit

4 said metal on said surface of said substrate without breaking said continuous  
 5 vacuum.

### REMARKS

The foregoing preliminary amendment (which is being mailed simultaneously with a request for filing a divisional application of pending application serial number 09/365,859) is submitted as noted above to define more specifically the invention described in this divisional application. Support for the amendments to claims 10, 12, and 14 can be found in claims 8 and 10 as originally filed. Furthermore, claims 10 and 11 have been amended to correct the dependency. The claims now pending in this divisional application are 10-20. Applicants have canceled claims 1-9. Further, Applicants have reviewed the specification and have found that the above typographical and/or clerical errors require amendment. No new matter has been added.

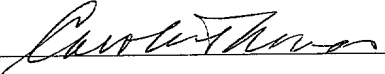
Respectfully submitted,

  
 Kelly Reynolds  
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#### **CERTIFICATION OF MAILING UNDER 37 CFR 1.10**

"Express Mail" mailing label number EL277591106US Date of Deposit: December 27, 2000 I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

Name: Carol M. Thomas Signature:   
 ibmb110231000pamd